

**Notice of Allowability**

Application No.

10/723,426

Examiner

Robert W. Horn

Applicant(s)

TOLIYAT ET AL.

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/2/2005.
2. ☒ The allowed claim(s) is/are 1, 6, 7 and 9-20.
3. ☒ The drawings filed on 02 November 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☒ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date 20050413.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 7/21/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20051117
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

DAVID M. STETSON  
SUPERVISOR, PATENT EXAMINER  
TECHNICAL CENTER

***Response to Amendment***

The examiner acknowledges the receipt of amendments dated 11/2/2005. The amendments are proper and clear all outstanding matters.

Regarding the drawings, the submitted replacement drawings overcome the objections to the original drawings and the objections are withdrawn.

The examiner acknowledges the withdrawal of rejected claims 2, 3, 5 and 8.

The examiner acknowledges the amendments to claims 6 and 7. It is determined that there were no rejections under 35 USC § 112 in the first action and the objection to claims being dependent to a rejected base claim was overcome by the inclusion of all the limitations of the base claim and any intervening claims. Claims 6 and 7 are now in condition for allowance.

The examiner discovered grounds for rejecting claim 9, which was found allowable on first action, while prosecuting these amendments. The examiner proposed an examiner's amendment to the attorney, Bradley R. Williams on December 2, 2005.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claim 9 (amended) A method for driving a motor, comprising:  
receiving a voltage input from a power supply;

Art Unit: 2837

boosting the voltage received from the power supply;  
energizing windings of the motor by unipolar inverter using the boosted voltage;  
storing at least some of the energy not used by the windings to excite the motor;  
and

when the windings are not being energized, returning at least some of the energy  
stored in the windings via energy return diodes to the booster.

Authorization for this examiner's amendment was given in a telephone interview  
with Bradley R. Williams on December 14, 2005.

***Allowable Subject Matter***

Claims 1 6, 7 and 9 (amended) and 10-20 allowed.

The reasoning for allowance of claims 1 and 9-20 is found in the action dated  
5/2/2005.

Claim 6 is found allowable for the combination of all the elements and specifically  
for the coupling of the energy return diodes to the booster energy storage section.

Claim 7 is allowable as dependent on claim 6.

Claim 9 (amended) is found allowable for all items in the list of steps for driving a  
motor. The distinguishing features include the method steps as amended:

energizing windings of the motor by unipolar inverter using the boosted voltage;  
when the windings are not being energized, returning at least some of the energy  
stored in the windings via energy return diodes to the booster.

Art Unit: 2837

The energizing step leaves energy stored in the windings. The not being energized step involves a novel way of returning this unused energy stored in the windings to the booster.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Horn whose telephone number is 571-272-8591. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S. Martin can be reached on 571-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rwh  
November 17, 2005